WE CLAIM:

1. A method for reserving resources in a wireless network, said method comprising the steps of:

monitoring a resource to obtain a resource value;

estimating resources needed for radio dependent and radio independent layers based on said monitored resource value; and

reserving said needed resources at the radio dependent and radio independent layers based on said estimate.

2. The method of claim 1 wherein said monitoring step further includes the step of monitoring call arrivals, resource requirement, and resource usage.

3. The method of claim 2 further comprising the step of updating the rate at which said estimating is done if the difference in resource usage is greater than or equal to a pre–determined value.

4. The method in accordance with claim 3 wherein said step of estimating further includes the step of modeling the resources needed as a Wiener process.

5. The method in accordance with claim 3 said calls are handoff calls.

6. The method in accordance with claim 3 wherein said calls are new calls originating within a cell.

7. The method in accordance with claim 3 wherein said calls are handoff calls and new calls originating within a cell.

8. A method for reserving resources in a mobile wireless internet protocol network, said method comprising the steps at a base station of:

monitoring call arrivals and resource requirements;

responsive to said monitoring, estimating the radio dependent and radio independent resources required; and

instructing radio independent and radio dependent layers to reserve the estimated resources for future calls.

9. The method in accordance with claim 8 wherein said estimating step resides at a radio- independent layer of the internet protocol.

10. The method in accordance with claim 8 further comprising increasing the rate of said monitoring step if the difference in resource usage is greater than or equal to a threshold value.

11. The method in accordance with claim 10 wherein said estimating step comprises Wiener process-based stochastic models.

12. The method in accordance with claim 11 wherein said estimating step resides at a radio-independent layer of the internet protocol.

13. The method of claim 12 wherein said calls are handoff calls.

14. The method in accordance with claim 12 wherein said calls are new calls originating within a cell.

15. The method in accordance with claim 12 wherein said calls are handoff calls and new calls originating within a cell.

16. The method in accordance with claim 8 wherein said step of monitoring monitors instantaneous values of handoff call arrivals and resource requirements.

17. The method in accordance with claim 8 wherein said instructing step causes reservation of both radio resources and internet protocol layer resources.

18. The method in accordance with claim 17 wherein said estimating step is based on a stochastic model.